

Exhibit O

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF VIRGINIA
Alexandria Division

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: :
SONY MUSIC ENTERTAINMENT, et al., :
Plaintiffs, :
: :
-vs- : Case No. 1:18-cv-950
: :
COX COMMUNICATIONS, INC., et al., :
Defendants. :
: :
-----:

VOLUME 3 (A.M. Portion)

TRIAL TRANSCRIPT

December 4, 2019

Before: Liam O'Grady, USDC Judge

And a Jury

1 Q. And did you come to any conclusions about the Audible
2 Magic system? Just a yes or no question.

3 A. Yes, yes.

4 Q. And are you prepared to discuss those today?

5 A. I am.

6 Q. Thank you.

7 And did you come to conclusions with respect to the
8 overall MarkMonitor system?

9 A. Yes, I did.

10 Q. And are you prepared to discuss those today?

11 A. Yes, I am.

12 Q. At a high level, what was your conclusions about the
13 MarkMonitor system, including the Audible Magic system used as
14 part of it?

15 A. Based on the evidence I've reviewed and examined, it's my
16 opinion that that system both accurately detects acts of
17 copying and distribution on the internet on these peer-to-peer
18 systems, and it also provides and produces accurate notices
19 that can be sent to an ISP like Cox to notify them of that
20 activity.

21 Q. Thank you.

22 Ms. Frederiksen-Cross, were you in the courtroom on
23 Monday for the parties' opening statements?

24 A. I was, Counsel.

25 Q. And did you hear Cox's counsel argue that, in very stark

1 terms, that there's no evidence of infringement in this case?

2 A. I heard that argument.

3 Q. And what do you think about that?

4 A. I completely disagree. I think that the amount of
5 evidence in this case is overwhelming that there were Cox
6 subscribers who were copying and distributing the plaintiffs'
7 music files on the internet.

8 Q. And we're going to discuss the basis for your opinion in
9 much more detail today, but at a high level, would you please
10 explain why you believe what you just said?

11 A. It is based first on a foundation of my understanding of
12 these peer-to-peer technologies, how they operate and the way
13 in which they allow the distribution and copying of content,
14 and then upon the specific evidence that I reviewed with
15 respect to the activity of Cox subscribers, and finally on my
16 inspection of the source code as well to understand exactly
17 how that worked and how it was able to do this detection and
18 how the notices were provided.

19 Q. And finally, I believe you said you did some work with
20 respect to reviewing the Cox CATS system; is that correct?

21 A. That is correct, Counsel.

22 Q. And, generally speaking, what is the CATS system?

23 A. CATS stands for the Cox Abuse Tracking System, and it's a
24 system that's designed to receive e-mails that are abuse
25 complaints and then to take the actions that Cox has

1 Q. So, Ms. Frederiksen-Cross, could these networks function
2 without hash values being reliable?

3 A. No.

4 Q. And before we had that sidebar, what, what happens with
5 respect to the user that's downloading or distributing if
6 their internet access is taken away?

7 A. Then they can't download and distribute.

8 Q. Let's, let's shift gears for a moment and -- or actually
9 not for a moment. Let's shift gears and talk about your
10 review of the MarkMonitor system, okay?

11 A. Okay.

12 Q. So you said MarkMonitor's role was to detect infringement
13 of -- and report it to Cox, correct?

14 A. That's correct. Cox and other subscribers, but -- or
15 other ISPs, but in this case, Cox is the focus.

16 Q. Okay. And at a high level, would you describe what your
17 review of the MarkMonitor system consisted of?

18 A. Sure. I reviewed the MarkMonitor source code. I
19 reviewed evidence produced by the MarkMonitor system. I
20 reviewed sound recordings that corresponded to the hashes of
21 infringing content. I reviewed samples of the notices that
22 MarkMonitor sent out and records about how many notices it had
23 sent out, and I also reviewed records that provided -- that
24 were drawn from MarkMonitor's records that provided
25 information about both the songs and the Audible Magic

1 verification associated with those songs, so song files and
2 Audible Magic verifications.

3 Q. And you -- did you speak with anybody at MarkMonitor?

4 A. I did have the opportunity, as I mentioned, to discuss
5 the operation of the MarkMonitor system with two MarkMonitor
6 employees, and I also had the opportunity to read their
7 depositions and/or declarations and some of the other
8 information that was made available to me about the system.

9 Q. Okay. Let's jump in in more detail to that MarkMonitor
10 system. What, what are the components of that system?

11 A. If we could go to the next slide, I have the three
12 principal components listed.

13 Q. Okay. What's the first component?

14 A. The verification module.

15 Q. And what is that?

16 A. The verification module is used to identify -- or to
17 create a database of known infringing works, and so there's
18 really two parts to that. One is downloading works, and then
19 the other is confirming their content, so you know that a
20 particular hash is associated with a file that is known to
21 contain some of plaintiffs' -- you know, either one of
22 plaintiffs' files or in some cases multiples of plaintiff's
23 files.

24 Q. Sure. So you mentioned downloading the file. Where is
25 it downloaded from?

1 ours with them this morning. This is a live demonstration.

2 THE COURT: That's what I said. I assume you shared
3 with them --

4 MR. ZEBRAK: Yes, sir.

5 THE COURT: Okay. I mumble also, so I apologize.

6 MR. ZEBRAK: No, that's my fault.

7 THE COURT: So let's do that. Before we resume,
8 let's -- you know, if you need to eat the ham sandwich out on
9 the courthouse steps, then let's get that done so that we can
10 come back at 5 minutes to two.

11 Mr. Buchanan, if you want to address that -- the
12 issue you raised this morning, we can do that right away when
13 we come back as well. Okay?

14 MR. OPPENHEIM: Thank you.

15 THE COURT: All right. We're in recess.

16 NOTE: At this point, the December 4, 2019, morning
17 portion of the case is concluded.

18 CERTIFICATE OF COURT REPORTERS
19

20 We certify that the foregoing is a true and
21 accurate transcription of our stenographic notes.

22 /s/ Norman B. Linnell
23 Norman B. Linnell, RPR, CM, VCE, FCRR

24 /s/ Anneliese J. Thomson
25 Anneliese J. Thomson, RDR, CRR

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VOLUME 9 (P.M. Portion)

TRIAL TRANSCRIPT

December 12, 2019

Before: Liam O'Grady, USDC Judge

And a Jury

1 in a BitTorrent network?

2 A. That particular step is identical. Now, it's only
3 downloading one piece. Right. So a real BitTorrent client,
4 obviously probably interested in the whole file. But the step
5 of downloading a piece and verifying would be exactly as a
6 BitTorrent client would do it.

7 Q. And did you prepare a slide about the fourth step in this
8 process?

9 A. I did, yes.

10 Q. What happens in the fourth step?

11 A. Okay. So at this point -- and there's an important --
12 sort of deduction to this "if." Right. If an infringing file
13 is found, right, at a CAS participating ISP, there's a notice
14 sent. Okay. So there's a bunch of things that sort of -- you
15 know, we break that down. And one is, of course, the IP
16 address. We've got to figure out if that IP address is in fact
17 a CAS -- a participating CAS ISP subscriber.

18 The other is, have we found an infringing file? And
19 there's a process by which steps 2 and 3 are joined to
20 determine that, ah, that piece that I just found not only is a
21 piece of the file that was advertised in the torrent, it's a
22 real piece, the verification checked, but also it's a piece of
23 an actual work.

24 So putting steps 2 and 3 together allows the software
25 to make that inference and generate the -- you know, decide

1 that it's time to generate a notice.

2 Q. By the way, were you able to examine the software that
3 implemented that step?

4 A. No. That step I never saw. I can only deduce what must
5 have happened. I was able to see the source code for steps
6 three and step four. I was able to identify those parts of the
7 software.

8 And it was really puzzling actually, because the two
9 databases that were used in these two steps appeared to be
10 completely different. Okay.

11 Now, I also was not provided with the schemas for
12 these databases --

13 MR. ZEBRAK: Objection, Your Honor.

14 THE COURT: Sustained. Sustained.

15 THE WITNESS: Okay. Sorry. I'm sorry, academics
16 like to ramble. I apologize.

17 MR. ZEBRAK: I move to strike.

18 THE COURT: Ask another question.

19 MR. BRODY: Yes, sir.

20 BY MR. BRODY: (Continuing)

21 Q. What happens in this step?

22 A. Can you clarify which step you're talking about?

23 Q. Step four.

24 A. I -- oh, I think I described that in maybe too much
25 detail. But to abbreviate that, if the software is able -- or

1 THE COURT: Okay.

2 MR. ELKIN: Thank you, Your Honor.

3 THE COURT: All right, good. You all have a nice
4 weekend, and we'll see you on Monday morning.

5 MR. OPPENHEIM: Thank you, Your Honor.

6 MR. ELKIN: You too, Your Honor.

7 THE COURT: All right, we're in recess.

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CERTIFICATE OF COURT REPORTERS

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16 We certify that the foregoing is a true and
17 accurate transcription of our stenographic notes.

18

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20 /s/ Norman B. Linnell
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23 /s/ Anneliese J. Thomson
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VOLUME 10 (A.M. Portion)

TRIAL TRANSCRIPT

December 16, 2019

Before: Liam O'Grady, USDC Judge

And a Jury

1 them?

2 MR. OPPENHEIM: Your Honor, I would ask that they
3 give us the list of numbers, allow us to have somebody review
4 them and see whether it's right or not, before the Court enters
5 them into evidence.

6 THE COURT: That's fine. Yeah, let's --

7 MR. BUCHANAN: The number would be DX 3758.

8 THE COURT: Just one big -- yeah, I'm not even sure
9 it was ever downloaded. Is it just digitally?

09:15:04 10 MR. BUCHANAN: Yes, we would move it that way, Your
11 Honor.

12 THE COURT: Okay.

13 MR. BUCHANAN: We agree to them digitally.

14 THE COURT: Okay. Well, I'll rule on that once
15 plaintiffs have had an opportunity to look at it and make sure
16 what's in the exhibit. Okay.

17 MR. BUCHANAN: Thank you, Your Honor.

18 THE COURT: All right. Mr. Brody.

19 MR. BRODY: I have two short things, Your Honor.

09:15:27 20 First, Your Honor permitted us to tender a written proffer
21 regarding the Audible Magic spreadsheets.

22 THE COURT: Yes, sir.

23 MR. BRODY: So I was going to do that right now.

24 THE COURT: Okay.

25 MR. BRODY: Counsel.

1 THE COURT: All right.

2 MR. BRODY: Second, we have -- Mr. Zebrak gave me two
3 demonstratives that they plan to use, he plans to use with
4 Dr. Feamster. One of them is fine. The other one may be fine,
5 but I just wanted to flag an issue with respect to it. If I
6 could tender the proposed demonstrative.

7 MR. ZEBRAK: I gave it to Joe, he's got it.

8 MR. BRODY: Okay. And then I'm -- if I could also
9 tender slides 37 and 38 from Dr. Feamster's direct testimony.

09:16:40 10 Dr. Feamster, you should step out into the hall.

11 NOTE: Dr. Feamster leaves the courtroom.

12 MR. BRODY: The demonstrative slide that they
13 tendered is this one that says what MarkMonitor actually did,
14 and it's got the four boxes in it, all of them with black
15 typeface in them.

16 THE COURT: Yes, sir.

17 MR. BRODY: This looks like his slide. As you can
18 see from the two I tendered to you, it actually isn't one of
19 the slides that he put up.

09:17:21 20 I certainly have no objection to them putting this up
21 and asking him, isn't it true that this is what MarkMonitor did
22 and so on and so forth.

23 What I'm concerned about is that there's going to be
24 some suggestion -- if you look at the one that looks most like
25 this, I guess I'd say, you'll see that the step 3 in the notice

1 to Cox box are shaded out on the slide that he used, and that's
2 because he was talking during that slide about steps 1 and 2.
3 And when he actually got to steps 3 and 4, the other stuff was
4 there.

5 THE COURT: The highlights.

6 MR. BRODY: So I have -- like I said, I have no
7 problem with them using the demonstrative to talk about what
8 they actually did, I just think there should not be any
9 suggestion that this represents what he put up, what he showed
09:18:12 10 the jury, or that he was concealing anything from the jury.

11 THE COURT: Okay.

12 MR. ZEBRAK: Your Honor, I'm perplexed at this. This
13 is his --

14 THE COURT: You, perplexed?

15 MR. ZEBRAK: Well, I mean, counsel is not entitled to
16 dictate what fair demonstratives I use. It's his slide --

17 THE COURT: He just doesn't want the jury confused
18 about the fact that some of them are highlighted -- or some of
19 them are bolded and some of them aren't.

09:18:41 20 So I'm going to allow you to use the demonstrative.
21 I don't think it's confusing to the extent that as long as
22 you're not representing that it is exactly the slide that Cox
23 presented, I think it's fine.

24 MR. ZEBRAK: Thank you, Your Honor.

25 THE COURT: Okay. Your exception is noted, Mr.

1 Brody.

2 MR. BRODY: Thank you.

3 THE COURT: All right. I saw Mr. Feamster here a
4 minute ago. You asked him to leave for a minute?

5 All right. Anything else?

6 MR. BRODY: Not from us, no.

7 THE COURT: Okay. Thank you.

8 Joe, then let's get our jury, please.

9 Come on up, Mr. Feamster, and take a seat.

09:19:41 10 NOTE: At this point the jury returns to the
11 courtroom; whereupon the case continues as follows:

12 JURY IN

13 THE COURT: All right. Please have a seat.

14 Good morning, ladies and gentlemen. Thank you for
15 making your way in on time again this morning. I hope you all
16 had a good weekend.

17 Did you all heed my advice and not do any research or
18 investigation? All right.

19 All right. Where are we? Mr. Zebrak, cross-
09:20:17 20 examination, sir.

21 MR. ZEBRAK: Yes, Your Honor. Thank you.

22 THE COURT: Have you got what you need, Dr. Feamster?

23 THE WITNESS: I think so. I just need a little
24 space.

25 THE COURT: Well, that's what--

1 lunch?

2 MR. BUCHANAN: No, Your Honor.

3 THE COURT: All right. All right. Then we are in
4 recess until 2:00.

5 NOTE: The morning portion of the proceedings on
6 December 16, 2019, is concluded.

7
8 CERTIFICATE OF COURT REPORTERS

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11 accurate transcription of our stenographic notes.

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13 /s/ Norman B. Linnell
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VOLUME 12

TRIAL TRANSCRIPT

December 18, 2019

Before: Liam O'Grady, USDC Judge

And a Jury

1 or sharing. In this case, we have evidence of both.

2 So what is that evidence? Recall Mr. Bahun, who
3 worked for MarkMonitor. This is the gentleman who the FBI, the
4 Department of Justice, and Homeland Security brings in to train
5 their agents on peer-to-peer issues.

6 And as a company, MarkMonitor is used by some of the
7 largest and most well-known companies in the world: movie
8 studios, book publishers, Google, Apple, Nissan, Coca-Cola,
9 banks, professional sports leagues. MarkMonitor is the gold
09:20:56 10 standard when it comes to antipiracy, and its process is
11 precise and meticulous.

12 MarkMonitor goes on to a peer-to-peer network. It
13 downloads and confirms a file is infringing. It then collects
14 evidence on users distributing that infringing file by
15 connecting to a peer and beginning the download process. By
16 downloading all of the information, that indicates that the
17 peer is actively distributing the infringing file and how.

18 Once all of that is confirmed and documented,
19 MarkMonitor sends an infringement notice to the relevant ISP,
09:21:36 20 and in this case, that was Cox.

21 Mr. Bahun went through numerous data packages of
22 evidence, and ultimately, as you saw, all of that data came
23 together to demonstrate why MarkMonitor's evidence collection
24 process worked.

25 And you will recall that Ms. Frederiksen-Cross

1 testified as a technology expert. Now, she has spent a
2 lifetime looking under the hood at real systems in the real
3 world, and she testified that she reviewed the MarkMonitor
4 process, the MarkMonitor and Audible Magic source code, and the
5 evidence collected in the case, among other things, and her
6 conclusions were clear.

7 She determined that the MarkMonitor system accurately
8 detected peers that are copying and distributing the
9 plaintiffs' copyrighted works, and that it prepares and sends
09:22:27 10 accurate notices about that infringement activity that it
11 detects.

12 During the course of Mr. Bahun's and
13 Ms. Frederiksen-Cross's testimony, they were asked about a
14 couple of different data fields that looked like it had certain
15 hashes that had two different recordings associated with them.
16 Do not be misled. These are litigation games. Cox is
17 desperate to find a glitch, but it can't.

18 You may recall that one of them was a file mislabeled
19 by a user as a Taylor Swift track, when Audible Magic had
09:23:02 20 reported that, in fact, it was a Lady Gaga song. We then
21 played the song in court, and lo and behold, it was Lady Gaga,
22 "Poker Face." That was one of the three examples.

23 That is no different than somebody putting the Lady
24 Gaga CD in the Taylor Swift CD case. This is not an error.
25 Notably, not a single Cox witness, fact or expert, testified at

1 send this back to them.

2 And hopefully this is just one of these initial
3 gathering-of-information type questions, but we will know that
4 soon enough.

5 All right. Then thank you all for assembling.

6 And we're in recess until we need to get together
7 again. Thank you.

8 NOTE: At this point a recess is taken; whereupon no
9 further matters are heard and the December 18, 2019, portion of
10 the case is concluded.

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CERTIFICATE OF COURT REPORTERS

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16 We certify that the foregoing is a true and
17 accurate transcription of our stenographic notes.

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